REMARKS

In response to the official action dated September 12, 2000, paper No. 5, in the above-referenced case, kindly amend the above-referenced application as follows.

The declaration stands objected to since no declaration has been filed. However, a rule 47 petition has been filed in this case to establish that the inventors have refused to sign. The outcome of this petition should obviate this issue.

Claims 1-6 stand rejected under 35 USC 102 as allegedly being unpatentable over Kato, U.S. Patent No. 4,567,602. This contention has been obviated by the cancellation of claims 1-5, and the substitution of new claims 7-35. New original claim 6 is retained, however. For reasons which follow, it is respectfully suggested that the original claim 6, as well as the new claims 7-35, should be in condition for allowance.

Claim 6 defines an important feature that the FPQSK signal that is formed has no slope discontinuity at the crossing point. In fact, the signal formed in the '602 patent, would have such a slope discontinuity. This is explained throughout the present specification, which shows how there can be errors at the crossing point. This was not understood prior to this application. Similar errors could occur in '602. As can be seen from figure 6 in '602, the elements are formed by half

symbol combinations. There may be a slope discontinuity at the location between them. Such is not done according to the present invention, and therefore it is respectfully suggested that claim 6 should be allowable for these reasons.

The other claims should also be allowable. Claim 7, for example, specifies mapping combinations of waveforms to full symbols from both I and Q channels. As explained above,'602 maps a half symbol at a time. Figure 6 shows a half symbol system. The mapping occurs half symbol at a time, unlike claim 7 which defines mapping full symbols of bits. For these reasons, claim 7 should be allowable for reasons along with claims which depend therefrom. Claim 9, for example, defines dividing the bits into either I or Q, and using them differently. This is not taught or suggested by '602.

Claim 10 should also be allowable for similar reasons. Claim 10 defines that the mapping forms an output without slope discontinuities. As explained above, such discontinuities would inherently be formed in their system, although they did not understand it. Claim 11 defines a binary coded decimal system, which is even further allowable.

Claim 12 should be allowable for similar reasons to those discussed above with respect to claim 7, since the '602 patent does not teach such mapping.

Claim 13 defines similar methodology and should hence be similarly allowable along with the claims which depend therefrom. Claims 16-18 should be allowable for similar reasons to those discussed above.

Claim 23 defines a coding system which maps between full symbols and coded outputs. As described above, this distinguishes over the art and hence should be allowable for reasons discussed above. Claim 28 also defines full symbol encoder outputs and should hence also be allowable along with the claims which depend therefrom.

In view of the above amendments and remarks, therefore, all of the claims should be in condition for allowance. A formal notice to that effect is respectfully solicited.

Please apply any other charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

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